CRUISE PLAN
OC4610 - WAVE AND SURF PREDICTION

9,12 March 2004

I. Objectives

The cruise objective is to provide students enrolled in OC4610 (Wave and Surf Prediction) with an introduction to wave measuring techniques and to provide them with wave data to process and analyze as part of the laboratory portion of this course. To that end the operational objective is to collect directional wave data in several areas of Monterey Bay with the use of several different types of bottom mounted wave sensors. The ships underway data collection system will also be operated continuously during the cruise.

II. Itinerary

Date	Time	Activity
8 March	1300-1700	Load and install all gear required for cruise operations.
9 March	0800	All participants for day one onboard ship.
9 March	0830	Ship departs Moss Landing
9 March	0830-1600	Deploy moorings in Monterey Bay.
9 March	1600	Ship returns to Moss Landing
12 March	0800	All participants for day two onboard ship.
12 March	0830	Ship departs Moss Landing.
12 March	0830-1600	Recover moorings deployed on 9 March.

III. Scientific Party

9 March:
Prof. Thomas Herbers - Chief Scientist, NPS
Mr. Paul Jessen - Oceanographer, NPS
LCDR Juan Conforto – Graduate Student, NPS
LTJG Emily Duvall – Graduate Student, NPS
LTJG Murat Elge – Graduate Student, NPS
LT Andres Enriquez – Graduate Student, NPS
LCDR Jimmy Horne – Graduate Student, NPS
LT Scott Peak – Graduate Student, NPS
LT Jonathan Vorrath – Graduate Student, NPS

12 March:
Prof. Thomas Herbers - Chief Scientist, NPS
Mr. Paul Jessen - Oceanographer, NPS
LT Brad Harris – Graduate Student, NPS
LCDR Jacob Hinz – Graduate Student, NPS
LT Aaron Lana – Graduate Student, NPS
LCDR Steven Mancini – Graduate Student, NPS
LT John Marburger – Graduat4e Student, NPS
LCDR Joseph Martin – Graduate Student, NPS

IV. Operational Plan

9 March

The ship will depart Moss Landing at 0830 PST on 9 March 2004 and steam to site 1 (Fig. 1, Table 1) where a single 3D-Wave instrument will be deployed. Water depth at this site is approximately 15 meters. The instruments to be deployed are each mounted in a fiberglass tripod approximately 1.5 meters in diameter and 1 meter tall (see Fig. 2). Each weighs about 200 pounds. There will be a length of polypropylene with a surface float attached to the tripods which is the means by which these instruments will be deployed and recovered. The instruments will be deployed using the ship's capstan or alternatively the trawl winch.

Following the deployment at site 1 the ship will steam south to site 2 (Fig. 1, Table 1) where another mooring will be deployed. This instrument will be an Aquadopp wave sensor/current profiler. The water depth at this site is approximately 16 m.

At site 3 which is just north of the Moss Landing channel two mooring will be deployed in close proximity to each other (50-100 meters apart). The instrument on one of these moorings will be a Nortek Vector and on the other a Sontek Triton.

Continuing south, another Aquadopp will be deployed at site 4, a 3D-Wave at site 5 and another 3D-Wave at site 6. Following the last deployment the ship will steam back to Moss Landing.

12 March

On March 12 the instruments deployed on the first cruise will be recovered. The ship will depart Moss Landing at 0830 PST on and steam to site 1 to recover the mooring at that location. Recovery operations will continue at site 2 - 6 after which the ship will return to Moss Landing.

V. Student Duties

The students will assist as needed with the deployment and recovery of the moorings. One student will be in charge of carefully noting the position of each mooring deployment site using a handheld GPS.

Table 1 - Positions for the instrument deployment operations during the OC4610 cruise of March 9, 12, 2004 aboard the R/V Point Sur.

Site	Latitude	Longitude	Depth(m)	Activity
1	36° 55.90' N	121° 53.30' W	15	Deploy 3D-Wave
2	36° 52.40' N	121° 50.35' W	16	Deploy 2MHz Aquadopp
3	36° 48.52' N	121° 47.75' W	14	Deploy Vector,Triton
4	36° 44.15' N	121° 49.25' W	14	Deploy 1Mhz Aquadopp
5	36° 37.25' N	121° 51.40' W	16	Deploy 3D-Wave
6	36° 37.34' N	121° 56.98' W	16	Deploy 3D-Wave

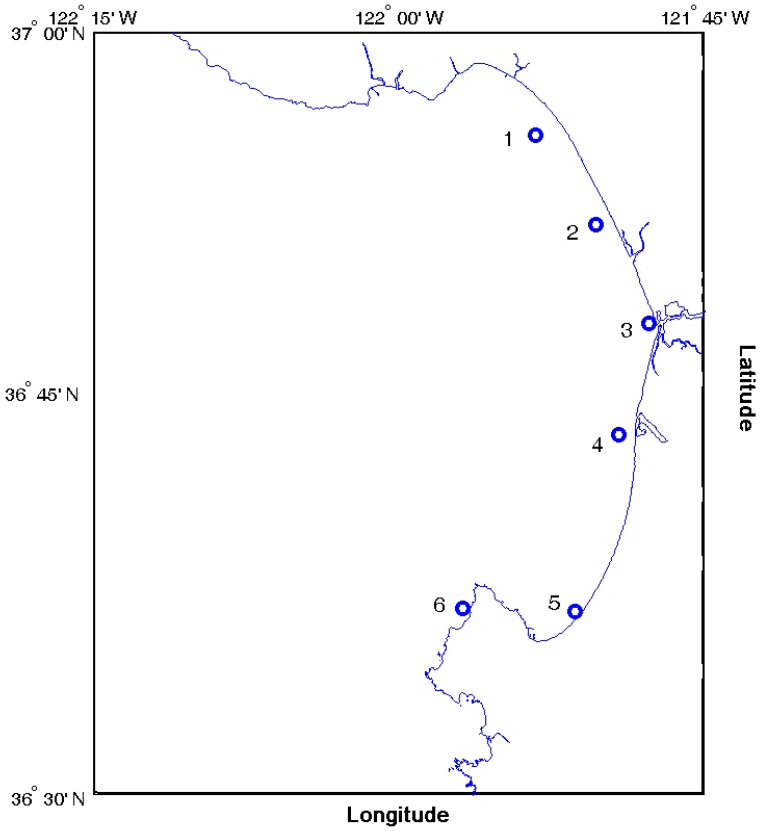

Figure 1 - Planned deployment positions for the bottom mounted wave sensor moorings to be deployed during the OC4610 class cruise of 9,12 March, 2004 aboard the R/V Point Sur.

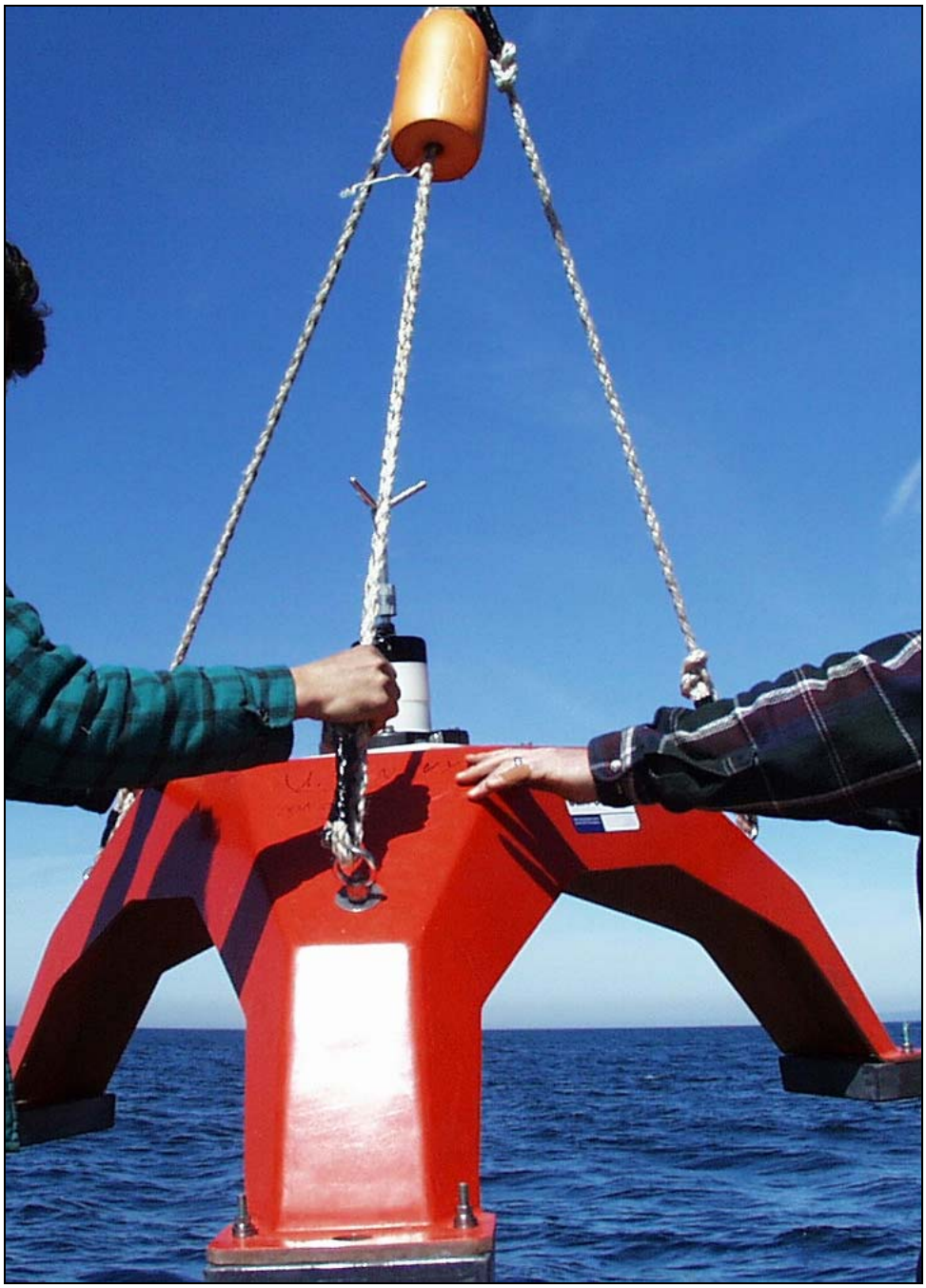

Figure 2 – Tripod mounting system to be used for deployment of the bottom mounted wave sensors during the OC4610 class cruise of 9,12 March 2004 aboard the R/V Point Sur.